Appendix A

Appendix – Explanatory Material

This section is included for informational purposes only.

The ECEiv Design Guide was developed to address the latest safety-related criteria, patient privacy issues and environmental requirements established for healthcare facilities by organizations such as JCAHO, Health & Human Services, NFPA, Department of Defense, US Army Medical Command and German/European Union safety agencies. In the past five years, various codes and standards have been created and adopted , which have impacted the European Environment of Care specifications and recommendations. Therefore, the ECEiv Design Guide has been issued to incorporate the necessary changes.

The ECEiv Design Guide's specifications and recommendations are chiefly influenced by the following organizations and their related requirements:

•Joint Commission on Accreditation of Healthcare Organizations (JCAHO) Statement of Conditions Compliance Document directly affects the ECEiv Design Guide, as it recognizes that "an essential element in delivering quality care safely and in achieving good results is ensuring that the environment in which the care is administered is safe, functional, supportive and effective for the patients, staff and visitors to the facility. JCAHO standards not only address the design, function and security of the facility, but also the education, training and preparedness of staff in handling emergencies, mass casualties and natural disasters….JCAHO standards also require compliance with the National Fire Protection Association's *Life Safety Code*® governing the construction and operation of all buildings with regard to fire safety and the protection of life."[1]

•The Health and Human Services (HHS) standard that directly affects the ECEiv Design Guide includes the Health Insurance Portability and Accountability Act of 1996 (HIPAA), which protects patients' medical records and other health information. HIPAA took effect on April 14, 2003.

•The National Fire Protection Association (NFPA) Life Safety Code 101 (2003) directly affects the ECEiv Design Guide as it deals with life safety from fire and like emergencies, and covers construction, protection and occupancy features to minimize danger to life from fires, smoke, fumes or panic before buildings are vacated.

•The Department of Defense (DoD) initiatives that directly affect the ECEiv Design Guide include:

- ❖The US Department of Defense Environmental Final Governing Standards for Germany (FGS), published in August 2002
- ❖Secretary of Defense Donald Rumsfeld's memorandum challenging the military to reduce preventable accidents, dated May 19, 2003

Appendix – Explanatory Material (continued)

•The US Army Medical Command directive that directly affects the ECEiv Design Guide includes Department of the Army Office of the Surgeon General LTG Ronald Blanck's memorandum issuing the Army-Wide Ergonomics Program Policy, dated August 31, 1998

•German/European Union Safety guidelines that directly affect the ECEiv Design Guide includes:

- ❖RAL Guetezeichen, Erzeugnisse aus Mineralwolle compliance for ceiling tiles, enforced since 2000
- ❖EU Council Directive of May 29, 1990, on the minimum safety and health requirements for work with display screen equipment

Documentation which substantiates the above referenced requirements is included in the Appendix.

The US Department of Defense Environmental Final Governing Standards for Germany

According to the U.S. Department Of Defense Environmental Final Governing Standards for Germany, Chapter 5 (Hazardous Materials), products containing cadmium or cadmium-compounds are considered "hazardous materials", and are banned from use in the interior environment (see FGS Table C5.T4). Since cadmium is used as a stabilizer in a wide range of PVC products, efforts were made to include as few products as possible that contained PVC.

Most products containing PVC that were initially included in the ECEiii Design Guide were substituted with PVC-free products. In many cases, the manufacturer offered a similar product that could be used in place of the original item containing PVC (i.e, wall protection, vertical blinds, carpet tiles, and walk-off mats).

Although there are only three products containing PVC in the ECEiv Design guide, and although these products are cadmium-free, the State of Hessen has deemed that materials containing PVC are considered "hazardous", therefore increasing disposal costs to the facility when the materials are removed and delivered to landfills. It is apparent that the use of products containing PVC is becoming less desirable from an environmental standpoint, particularly in Europe. It is for this reason that it is recommended that products containing PVC be phased out of ERMC MEDCOM facilities in three to five years.

All products containing PVC are noted in bold text in Section 3 "Material Finishes" of the ECEiv Design Guide.

The following e-mail messages confirm that the three products containing PVC are cadmium-free:

From Armstrong DLW Flooring (October 13, 2004):

" I can say NO, we don't use cadmium or cadmium compounds in our Homogenous PVC floorings. If you have any more questions do not hesitate to ask."

Mit freundlichen Grüßen / best regards,
Volker Weismann

Armstrong DLW AG
Technical Information Support
Telefon 0049 (0)71 42 71 - 255
Fax: 0049 (0)71 42 71-99-146
volker_weismann@armstrong.com

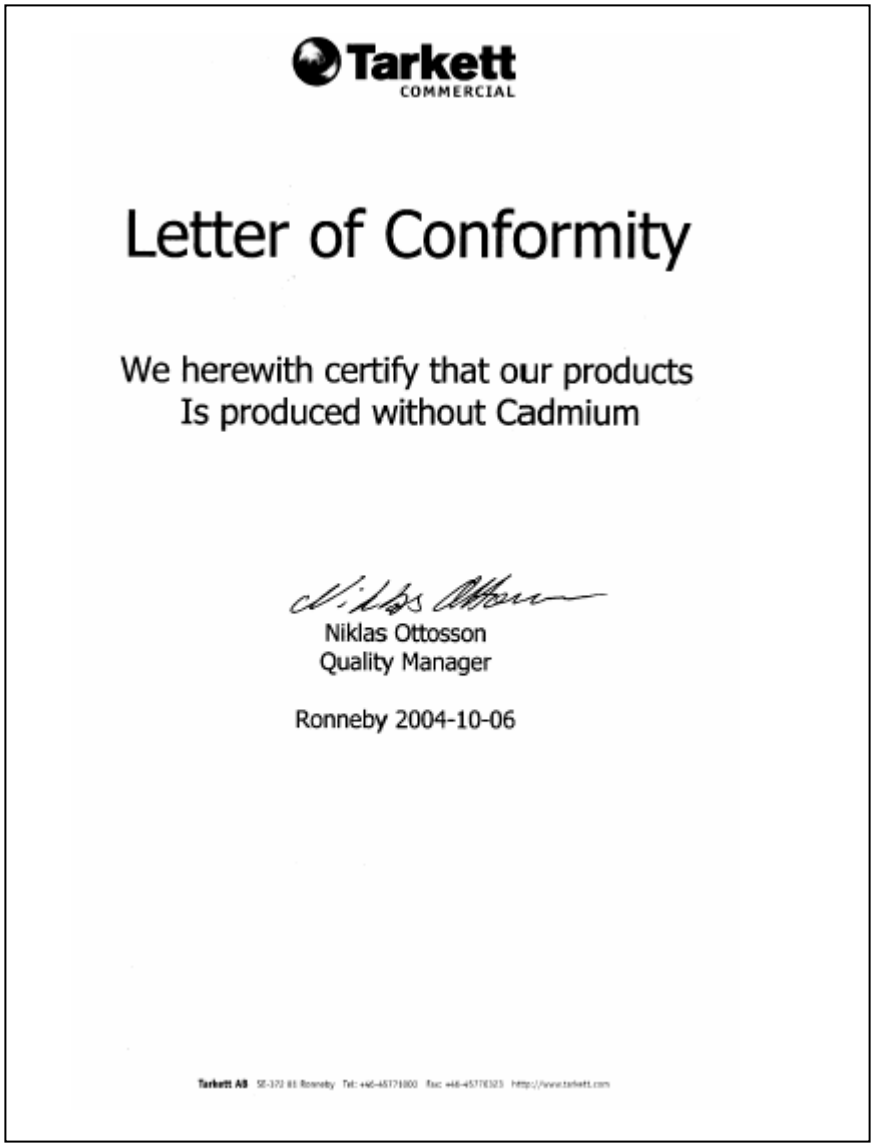
From Mechoshades (October 6, 2004):

"No, we do not use cadmium in any of our stabilizers, or in any part of our PVC. We use barium zinc stabilizers. Please let me know if I can help any further. "

Gwen Jones
Development Engineer
Twitchell Corporation
(Supplier to Mechoshades – Thermoveil product)
4031 Ross Clark Circle, NW
Dothan, AL 36303

The US Department of Defense Environmental Final Governing Standards for Germany (continued)

From Tarkett Flooring (October 6, 2004):



Tarkett
COMMERCIAL

Letter of Conformity

We herewith certify that our products
Is produced without Cadmium

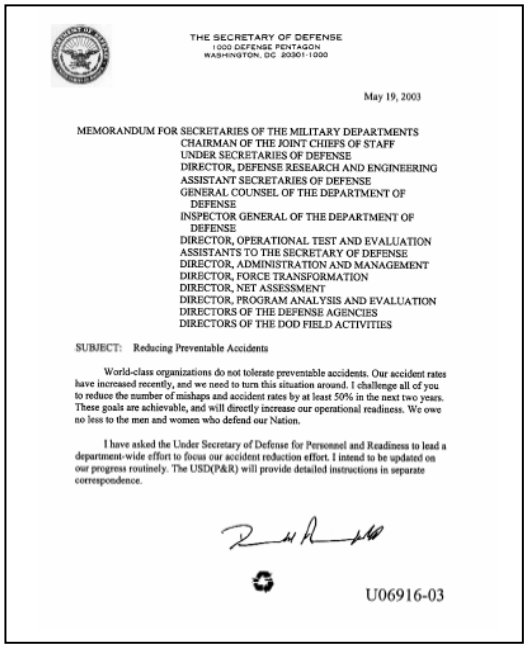
Niklas Ottosson
Quality Manager

Ronneby 2004-10-06

Tarkett AB SE-372 81 Ronneby Tel: +46-457718000 Fax: +46-457781323 http://www.tarkett.com

The US Department of Defense Environmental Final Governing Standards were published in August 2002. Contact information for the document is as follows:
HQ USAREUR & 7th Army
Office of the Deputy Chief of Staff, Environmental Division
Unit 29351
APO AE 09014

Reducing Preventable Accidents Memo from Secretary of Defense Donald Rumsfeld



THE SECRETARY OF DEFENSE
1000 DEFENSE PENTAGON
WASHINGTON, DC 20301-1000

May 19, 2003

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
DIRECTOR, DEFENSE RESEARCH AND ENGINEERING
ASSISTANT SECRETARIES OF DEFENSE
GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE
INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE
DIRECTOR, OPERATIONAL TEST AND EVALUATION
ASSISTANTS TO THE SECRETARY OF DEFENSE
DIRECTOR, ADMINISTRATION AND MANAGEMENT
DIRECTOR, FORCE TRANSFORMATION
DIRECTOR, NET ASSESSMENT
DIRECTOR, PROGRAM ANALYSIS AND EVALUATION
DIRECTORS OF THE DEFENSE AGENCIES
DIRECTORS OF THE DOD FIELD ACTIVITIES

SUBJECT: Reducing Preventable Accidents

World-class organizations do not tolerate preventable accidents. Our accident rates have increased recently, and we need to turn this situation around. I challenge all of you to reduce the number of mishaps and accident rates by at least 50% in the next two years. These goals are achievable, and will directly increase our operational readiness. We owe no less to the men and women who defend our Nation.

I have asked the Under Secretary of Defense for Personnel and Readiness to lead a department-wide effort to focus our accident reduction effort. I intend to be updated on our progress routinely. The USD(P&R) will provide detailed instructions in separate correspondence.

U06916-03

The memo from Donald Rumsfeld (above) issues a challenge to Military organizations concerning preventable accidents. The key text from the memo is transcribed below:

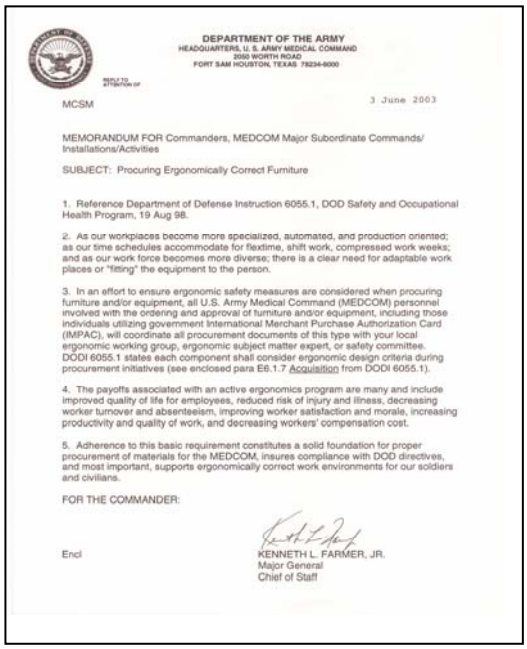
"Subject: Reducing Preventable Accidents (dated May 19, 2003)

World-class organizations do not tolerate preventable accidents. Our accident rates have increased recently, and we need to turn this situation around. I challenge all of you to reduce the number of mishaps and accident rates by at least 50% in the next two years. These goals are achievable, and will directly increase our operational readiness. We owe no less to the men and women who defend our Nation.

"I have asked the Under Secretary of Defense for Personnel and Readiness to lead a department-wide effort to focus our accident reduction effort. I intend to be updated on our progress routinely. The USD(P&R) will provide detailed instructions in separate correspondence."

This challenge directly impacts safety for military and civilian patients and staff, and ERMC facilities are dedicated to implementing the proper safety policies and products in the healthcare environment. Interior finishes that are appropriate, ensuring safety for occupants, and furnishings which offer ergonomic support are recommended and specified for MEDCOM facilities in Europe.

Ergonomics Memo from MG Kenneth L. Farmer, Jr., US Army MEDCOM Chief of Staff



DEPARTMENT OF THE ARMY
HEADQUARTERS, U. S. ARMY MEDICAL COMMAND
2050 WORTH ROAD
FORT SAM HOUSTON, TEXAS 78234-6000

REPLY TO ATTENTION OF

MCSM

3 June 2003

MEMORANDUM FOR Commanders, MEDCOM Major Subordinate Commands/ Installations/Activities

SUBJECT: Procuring Ergonomically Correct Furniture

1. Reference Department of Defense Instruction 6055.1, DOD Safety and Occupational Health Program, 19 Aug 98.

2. As our workplaces become more specialized, automated, and production oriented; as our time schedules accommodate for flextime, shift work, compressed work weeks; and as our work force becomes more diverse; there is a clear need for adaptable work places or "fitting" the equipment to the person.

3. In an effort to ensure ergonomic safety measures are considered when procuring furniture and/or equipment, all U.S. Army Medical Command (MEDCOM) personnel involved with the ordering and approval of furniture and/or equipment, including those individuals utilizing government International Merchant Purchase Authorization Card (IMPAC), will coordinate all procurement documents of this type with your local ergonomic working group, ergonomic subject matter expert, or safety committee. DODI 6055.1 states each component shall consider ergonomic design criteria during procurement initiatives (see enclosed para E6.1.7 Acquisition from DODI 6055.1).

4. The payoffs associated with an active ergonomics program are many and include improved quality of life for employees, reduced risk of injury and illness, decreasing worker turnover and absenteeism, improving worker satisfaction and morale, increasing productivity and quality of work, and decreasing workers' compensation cost.

5. Adherence to this basic requirement constitutes a solid foundation for proper procurement of materials for the MEDCOM, insures compliance with DOD directives, and most important, supports ergonomically correct work environments for our soldiers and civilians.

FOR THE COMMANDER:

Encl

KENNETH L. FARMER, JR.
Major General
Chief of Staff

The memo from MG Kenneth Farmer, dated June 3, 2003 (above) addresses the Army's dedication to implementing an Ergonomics Program, and specifically its impact to MEDCOM facilities worldwide. The key text is transcribed below:

"As our workplaces become more specialized, automated, and production oriented; as our time schedules accommodate for flextime, shift work, compressed work weeks; and as our workforce becomes more diverse; there is a clear need for adaptable work places or "fitting" the equipment to the person.

In an effort to ensure ergonomic safety measures are considered when procuring furniture and/or equipment, al US Army Medical Command (MEDCOM) personnel involved with the ordering and approval of furniture an/or equipment, including those individuals utilizing government International Merchant Purchase Authorization Card will coordinate all procurement documents of this type with your local ergonomic working group, ergonomic subject matter expert, or safety committee. DoDI 6055.1 states each component shall consider ergonomic design criteria during procurement initiatives.

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Adherence to this basic requirement constitutes a solid foundation for proper procurement of materials for the MEDCOM insures compliance with DoD directives, and most important, supports ergonomically correct work environments for our soldiers and civilians."

Ergonomics Program Policy

In response to the Army-Wide Ergonomics Program Policy and the 1990 EU Directive (see Section 6 on Ergonomics), the ECEiv recommends that products which are modular and flexible be used in the workplace. For reconfigurable workstations, Herman Miller's Action Office, Ethospace and Co/Struc products meet the stringent requirements for ergonomics and are recommended in the ECEiv Design Guide.
Herman Miller also offers task seating which supports ergonomics (Aeron and Mirra) – two seating choices which have been received FIRA International's Ergonomics Excellence Awards (see following pages).

The following statement from Herman Miller outlines their commitment to providing products that meet ergonomic requirements:

"*Herman Miller products incorporate capabilities and features that allow the physical environment to fit the workers using the space. Adjustable height work surfaces, shelving and storage units allow the workspace to be configured and reconfigured to accommodate users. The users themselves can adjust many components. Soft edges, flexible pads and contoured surfaces reduce contact stress and help users avoid injury. Adjustable features on seating allow users to move and assume a variety of postures. Adjustable monitor support surfaces and input platforms make an ergonomic difference. Carts, storage and transport products are sized to support the work process in a variety of environments.*

Herman Miller devotes considerable focus to Ergonomic research and design. Our products are engineered and manufactured to meet or exceed applicable, well-known Ergonomic standards and guidelines.

Some examples of current and past standards / guidelines include:
OSHA Guidelines
ANSI HFS VDT and ANSI / HFES 100 Voluntary Standards
ISO 9241-3 and 9241-5
BIFMA Ergonomics Guideline for VDT Furniture Used in Office Work Spaces
ANSI Z-365
CSA Z412-M89
EN 1335, BS 5459, BS 5940
Germany's "GS" (General Safety)

Our Design staff carries this focus to the project level to make best use of these features and benefits in the completed workspace.

We want users to get the best from our products. Do workers understand ergonomic problems? Do they know how to avoid risks by making adjustments to their equipment or modifying their work habits? Good job design, technology design, and workstation design are of little value unless people are informed. We offer product orientation and training to help owners and users get the best value from their workplaces.
We study work and living environments and design and deliver products and services that make these environments work better. To that end we are leaders in the world of workplace design going beyond existing norms and standards to create new value and benefit for users of our products."

Mr. Rick Fisk
Healthcare Program Manager for Government
Herman Miller Inc.

Ergonomics Program Policy (continued)

ERGONOMICS UNIT
Business Consultancy Services

FIRA

AN ERGONOMICS EVALUATION OF HERMAN MILLER'S AERON CHAIRS

Sizes A, B and C AERON chairs were evaluated by the FIRA Ergonomics Unit. The main finding of this assessment is that these chairs were ergonomically sound. Taken together they offer a better fit for users than current chairs in the market.

Having three different sizes of chairs is an excellent idea and it is in agreement with the ergonomics philosophy of the draft International Standard, ISO 9241 Part 5[1], which aims to fit furniture to individuals regardless of their sizes and shapes. These chairs are so dimensioned that Sizes A, B and C would perfectly fit small, medium and large members of the user populations. Herman Miller should be congratulated in breaking away from the common relationship between the size of a chair and the user's status, which is ergonomically incorrect.

The medium size chair (size B) has met the requirements of the British chair dimensions standard (BS 5940 Part 1[2]). Hence it is considered that the Size B chair would dimensionally fit the 5th to 95th percentile of user populations. Size A failed the seat height and lumbar support point requirements as they were below the stated values, which indicated better fit for the smaller members of user populations. Size C failed the effective seat depth as this dimension was greater than the stated one, which indicated better fit for the larger members of the user populations. Therefore, it is considered that the fact that sizes A and C chairs have not fully met the requirements of the BS 5940 Part 1 would not affect the fit and comfort of these chairs provided that they are selected on the basis of the users' sizes rather than their status.

Levent Çaglar, Ergonomist at FIRA, 23 September 1994

1 ISO 9241 Ergonomic requirements for office work with visual display terminals (VDTs), Part 5: Workplace requirements (This is a draft standard and once it is finalised it will also be published as a European standard with the same title but numbered EN 29241)

2 BS 5940 Office Furniture, Part 1: Specification for design and dimensions of office workstations, desks, tables and chairs, 1980

Whether you are a manufacturer, retailer, supplier, shopfitter, architect or designer we can satisfy your exact requirements for furniture and related product knowledge.

Maxwell Road Stevenage
Herts SG1 2EW England
Telephone : 0438 313433
Facsimile : 0438 727607

Ergonomics Program Policy (continued)

Reprint from Herman Miller's Website (www.hermanmiller.com)

"Mirra receives FIRA Ergonomics Excellence Award
April 30, 2004

FIRA International Ltd., a leading European furniture industry research organization, has awarded the Mirra chair its FIRA Ergonomics Excellence Award for 2004.

FIRA, based in Hertfordshire, England, is recognized as a foremost world authority on furniture testing. Mirra was found to meet the organization's structural and safety requirements pursuant to British and European standards and FIRA specifications. Additionally, FIRA's ergonomics testing unit rated Mirra's ergonomic features "excellent."

For more than 50 years, FIRA has championed the development of new and better materials, improved processes, and appropriate standards to enhance the quality of furniture and assist manufacturers and retailers to become more competitive.

The Furniture Industry Research Association, representing all sectors of its industry and allied groups, supports FIRA's ongoing research programs."

RAL Guetezeichen, Erzeugnisse aus Mineralwolle Compliance

In Germany, ceiling tiles made of mineral fibers must be "RAL Guetezeichen, Erzeugnisse aus Mineralwolle" compliant. This is generally indicated with an RAL seal of quality (as shown below), and has been enforced since 2000.

It has been determined that products manufactured out of "rock wool (Mineralwolle Daemmstoffen)" containing "mineral fibers" create a possible outcome similar to the fibers from asbestos (which have been proven to cause lung cancer). There are actually three categories of materials:

1. Materials that are safely manufactured in accordance with Gefahrstoffverordnung (HAZMAT ordinance, Anhang IV Nr. 22 Abs 2.) These materials are "marked" RAL "Guetezeichen, Erzeugnisse aus Mineralwolle
2. Materials that are expected to cause cancer
3. Materials that are known carcinogens (see MSDS , para. 11, Toxicity information)

With respect to mineral wool products, these types of materials can be categorized as either "old" or "new". In Germany, the only activities authorized to work with “old material“ are those engaged in demolition, modernization, abatement, or maintenance. The regulatory requirement (GE) for work with this type of ceiling material is the TRGS 521 (Technical rules for dangerous materials).

To determine whether a mineral wool product is old or new, “old” material meets at least one of the following criteria:

- The material is manufactured before 01 June 2000
- The date that the material was manufactured is unknown
- The material is not marked with the RAL seal of quality

“Old” material (at a minimum) is prohibited from usage.

Ceiling material that has been exposed to thermal conditions classified as hazardous is also prohibited from usage.

Details can be found in the Handlungsanleitung "Umgang mit Mineralwolle-Daemmstoffen (Glaswolle, Steinwolle), from the Berufsgenossenschaft derBauwirtschaft.

Because most ERMC MEDCOM facilities are in Germany, and because the RAL requirement affects German facilities and construction, it was determined that only products that are RAL compliant would be included in the ECEiv Design Guide.

RAL Compliance - Armstrong's Position Paper

Armstrong (a manufacturer of ceiling tile products that are not RAL compliant, and are therefore not specified in the ECEiv Design Guide) sent the following position paper on April 30, 2004, addressing the mineral fiber issue with respect to Armstrong Ceiling tiles:

Premise

In October 2001, the International Agency for Research on Cancer (IARC, part of the World Health Organisation) re-classified mineral wool from category 2B (possible carcinogen) to category 3 (inadequate data)

1). Regulatory Requirements:

i). European:

The European Community formally adopted European Directive **97/69/EC** on the Classification, Packaging and Labelling of Dangerous Substances on December 5th 1997.

In the European Directive, Note Q identifies several methods that may be used to demonstrate a mineral wools biosolubility and thereby exonerate them from any suspicion of carcinogenicity.

These are:

- A short-term biopersistence test by inhalation has shown that fibres longer than 20 µm have a weighted half life of less than 10 days; or
- **A short-term biopersistence test by intratracheal instillation has shown that the fibres longer than 20 µm have a weighted half life of less than 40 days; or**
- An appropriate intra-peritoneal test has shown no evidence of excess carcinogenicity; or
- Absence of relevant pathogenicity or neoplastic changes in a suitable long term inhalation test.

[bold indicates selected test method used by Armstrong]

This directive was accepted by qualified majority vote, with Germany the only member country voting against the directive.

ii). Germany:

Unilaterally, Germany decided to introduce a new piece of legislation, entitled Appendix V, No. 7, Ordinance on Dangerous Chemicals (Gefahrstoffverordnung), which contradicts some of the requirements of the European Directive **97/69/EC**

In Germany, for mineral wools classified as category 3, a variant note Q_2 applies. This note allows for the exoneration from suspicion of carcinogenicity if:

(continued)

RAL Compliance - Armstrong's Position Paper (continued)

•An appropriate intraperitoneal test at 5 x 10^9 WHO fibres in the size distribution of a typical workplace has shown no excess carcinogenicity; or

•**The half life after intratracheal instillation of 2mg of a fibre suspension for fibres with a length of more than 5 µm, a diameter of less than 3 µm and a length-to-diameter ratio of more than 3:1 (WHO fibre) is 40 days or less; or**

•The Ki is > 40

[bold indicates selected test method used by Armstrong]

2). Armstrong Results:

	Long Fibres fraction: Fibre length > 20 µm, L/D > 3/1	**WHO fibre fraction: Fibre length > 5 µm, fibre dia. < 3 µm, L/D > 3/1**	**Armstrong Results**
European Directive 97/69EC	**<40 days**		**23 days** (95% Confidence limit 19-28 days)
German Gefahrstoffverordnung		**<40 days**	**28 days** (95% Confidence limit 24-32 days)

3). Quality Assurance:

Armstrong manufactured mineral wool is formulated in accordance with our patent (Patent No: US 6,265,335 B1; July 24, 2001), and fully meets German mineral wool requirements. Additionally, our wool is the subject of bi-annual chemical analysis by an approved external testing authority, which allows us to correlate for ongoing compliance with the European regulations.

For product quality assurance, Armstrong has embraced the ISO 9000 series methodology to ensure ongoing compliance of our manufactured mineral wool. Our mineral wool manufacturing facility is currently certified and audited in accordance with ISO 9001:2000.

We are aware and indeed have in the past been members of the G.G.M. Gütegemeinschaft Mineralwolle (association of mineral wool product manufacturers), but have determined that we would only be fostering national requirements rather than European ones if we continued our membership of G.G.M. and opted for the associated RAL mark.

Armstrong, as a company, is embracing the move towards more harmonised test standards and regulations for the EEA (European Economic Area). We have tested to ensure compliance with the German regulations, but in the longer term envisage appropriate consolidation of the current regulations rather than additional diversification within the EU.

Slip Resistance for Flooring Materials

There are certain German regulations that outline criteria for slip resistant flooring. For industrial (commercial) applications, German Standard DIN 51130 provides valuation codes for flooring based on testing assuming an inclined plane, walking with well-defined test footwear and a test medium (such as oil); see Fig. 1 below. The valuation codes established in DIN 51130 range from R9-R13. The basic regulation defining requirements for slip resistance industrial spaces is as follows: "Code and Practice for floors in work rooms and areas with high risk of slipping", BGR 181 (previously ZH 1/571), current version from 1998, Technical Committee "Building Fittings" of the BGZ, Bonn (Competent authority: Main organization of the Trade Associations, Alte Heerstraße 111, 53574 St. Augustin).[2]

Fig. 1

In Fig. 1, the DIN 51130 standard describes the method of determining the anti-slip properties of floor surfaces for shoe traffic.

Supporting information offered from Agrob Buchtal (a leading German manufacturer of ceramic tiles) has published the following:

"According to BGR 181 (ZH 1/571) and BGE M10 documents, the following valuation codes are assigned to each working area as well as any displacement space. The standard value permits deviations in individual cases.

12 Health Service Rooms:	
12.1 Disinfection Rooms (wet)	R11
12.2 Pre-cleaning areas of sterilization	R10
12.3 Feces disposal rooms, discharge rooms, unclean nursing work rooms	R10
12.4 Pathological facilities	R10
12.5 Rooms for medical baths, hydrotherapy	R11
12.6 Washrooms of operating theatres, plastering rooms	R11
12.7 Sanitary rooms, ward bathrooms	R10
12.8 Rooms for medical diagnosis and therapy	R9
12.9 Operating theatres	R9
12.10 Wards with hospitals and corridors	R9
12.11 Medical practices, day clinics	R9
12.12 Pharmacies	R9
12.13 Laboratories	R9

Slip Resistance for Flooring Materials (continued)

If floor coverings of different slip resistance are used in connected work rooms or areas, only floor coverings of two consecutive valuation groups should be used next to each other, e.g. valuation groups R10 and R11; R11 and R12, etc."[3]

Pertaining to ceramic tile flooring, in areas referenced above where R9 flooring is allowed, ceramic tile flooring with a valuation code of R10 is recommended in the ECEiv. Ceramic floor tile with a valuation code of R11 may be required for specialty areas (as noted above).

In the case of rubber flooring, a valuation code of R9 is required. Rubber flooring is used extensively in European MEDCOM facilities, but is not generally specified in wet areas, such as toilet rooms, showers or medical bath/hydrotherapy areas.

"Wet Barefoot Areas", as defined by German Standard DIN 51097, assigns valuation codes for areas that occur around pools (including the stairs and ladders leading into the pool).

For wet barefoot area applications, German Standard DIN 51097 provides valuation codes for flooring based on testing assuming an inclined plane, walking on barefoot and a test medium (wetting agent solution); see Fig. 2 below. The valuation codes established by DIN 51097 are denoted as A, B or C. The basic regulation defining requirements for slip resistance industrial spaces is as follows: "Code of Practice for floors coverings for wet barefoot areas", GUV26.17, April 1986 (Competent authority: Federal Association of the German Accident Insurance Companies, Fockensteinstraße 1, 81539 Munich).[4]

The ECEiv requires a valuation code of B for wet barefoot areas.

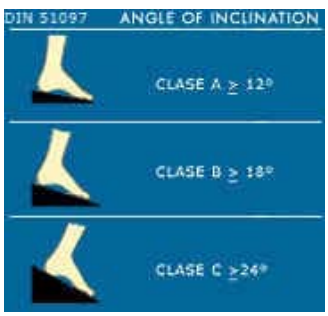

Fig. 2
In Fig. 2, the DIN 51097 standard measures the anti-slip properties for a barefoot traffic zone

Appendix Bibliography:

[1] "Setting the Standard: The Joint Commission Health Care Safety and Quality ." Joint Commission on Accreditation for Healthcare Organizations. Online at website http://www.jcaho.org, 2004.

[2] "Slip Resistance in Industrial and Barefoot Areas." Agrob Buchtal technical brochure. Germany: Agrob Buchtal, p. 3, May 2001.

[3] "Slip Resistance in Industrial and Barefoot Areas.", p. 5.

4 "Slip Resistance in Industrial and Barefoot Areas.", p. 21.